



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/730,706

12/08/2003

Allan T. Priore

82336.84094-001

4838

24335 7590 02/20/2007
WARNER NORCROSS & JUDD LLP
900 FIFTH THIRD CENTER
111 LYON STREET, N.W.
GRAND RAPIDS, MI 49503-2487

EXAMINER

HWANG, VICTOR KENNY

ART UNIT

PAPER NUMBER

3764

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
--	-----------	---------------

3 MONTHS

02/20/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/730,706

Applicant(s)

PRIORE, ALLAN T.

Examiner

Victor K. Hwang

Art Unit

3764

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 December 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 3-15 is/are rejected.
- 7) ☒ Claim(s) 2 and 10 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 December 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date Dec. 8, 2003.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of Group I (claims 1-15) in the reply filed on December 28, 2006 is acknowledged. Claims 16-21 have been cancelled by the applicant.

Drawings

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: the specification refers to "metacarpal phalangeal joints 1-5" on page 5, lines 10 and 11; "digits 2-5" on page 12, lines 10 and 11; "digits at metacarpals 2-5" on page 12, line 16; "joints 2-5" on page 12, line 15; and "metacarpal phalangeal metacarpal 2" on page 14, line 13. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

3. The disclosure is objected to because of the following informalities: the description of the force vectors shown in Fig. 11 does not appear to correlate with common knowledge of vector addition. Applicant describes two force vectors 425 and 415 applied to position 410 yields the same net extension effect as single force 405. This does not appear correct. Vector addition usually involves placing the tail of a second vector at the head of first vector and the resulting vector having a tail common to the tail of the first vector and a head common to the head of the second vector. Not what is shown in Fig. 11 and described in the specification.

Appropriate correction or clarification is required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 9-15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 9, the recitation "a base secured to at least one of an arm and a wrist" on line 2 sets forth recitations describing the elements of the invention with respect to a particular user. As the particular user cannot form part of the invention, and it is impossible to ascertain the correspondence between a particular apparatus and the invention until a particular user engages the apparatus, the claim is indefinite. Presumably, a base is adapted to be secured to at least one of an arm and a wrist. Claims 10-15 depend from claim 9 and are likewise indefinite.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1, 3 and 5-8 are rejected under 35 U.S.C. 102(b) as being anticipated by *Villepigue* (US Pat. 6,059,694). *Villepigue* discloses a dynamic gauntlet comprising a base 18 adapted for securement to at least one of a wrist and an arm of a wearer; and a flexible hand piece 20. The flexible hand piece includes a plurality of finger elements 42. Each finger element receives and at least partially extends or flexes a finger. The hand piece includes a common piece connecting the plurality of finger elements. At least one of the base 18 and hand piece 20 is constructed of an elastomeric material (col. 7, lines 18-32) and includes an anchor 26 having an attachment element 48 extending toward the other of the base and hand piece, the other of the base and the hand piece including an attachment area 46 complimentary to the attachment element. The attachment elements are releasably positioned at a pre-selected position on the attachment area to provide a tension in the anchor.

The hand piece 20 includes an anchor 26 extending toward the base on the dorsal side of the hand. The anchor 26 includes a first end fixedly joined with at least one of the hand piece and the base and a second end that includes the attachment element, said second end releasably positioned adjacent said other of said hand piece and said base.

A thumb piece 28 is secured to the thumb and separate from the hand piece. The thumb piece includes a secondary attachment area and wherein at least one of the hand piece and the

thumb piece includes a secondary anchor 30 including a secondary attachment element 56 that is releasably positioned at a pre-selected position on the attachment area 54 to provide tension in the secondary anchor thereby reconfiguring the thumb.

8. Claims 1, 3, 4, 8, 9 and 11-15 are rejected under 35 U.S.C. 102(b) as being anticipated by *Wiggins* (US Pat. 5,697,103). *Wiggins* discloses a therapeutic gauntlet (Figs. 4-7) comprising a base 410 adapted to be secured to at least one of an arm and a wrist. The base includes a plurality of attachment points 412. The base is associated with a wrist cornerstone of the hand. Extending means 320,322,324,326,328 at least partially extend a digit of a hand and is associated with at least one of a thumb cornerstone of the hand and a finger cornerstone of the hand. Tension means 366,368,370,372,374 provide a pre-selected tension on the extending means to reconfigure at least one of the digit and the hand. The tension means are elastic bands and are constructed substantially only from an elastomeric material. Attachment means 380,382,384,386,388 releasably attach the tension means to at least one of the plurality of attachment points on the base, wherein attachment of the tension means at different attachment points adjusts the tension transmitted through the tension means to the extending means, wherein at least one of the digit and the hand is reconfigured in a selected splinting position, whereby the spatial relationship between at least two of the wrist cornerstone and the at least one of the thumb cornerstone and the finger cornerstone is modified.

The extending means 320,322,324,326,328 are tube-shaped and adapted to receive a digit. The extending means can be considered a hand piece including at least one digit element. The hand piece includes a plurality of finger elements 320,322,324,326 that each receive a finger

and a thumb piece that includes a thumb element 328 that receives a thumb. The extending means extends the proximal interphalangeal joint of at least one of a finger and a thumb in a substantially extended configuration. The hand piece includes an anchor 380 extending toward the base on the dorsal and ulnar side of the hand.

Allowable Subject Matter

9. Claim 2 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

10. Claim 10 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

11. The following is a statement of reasons for the indication of allowable subject matter: the prior art of record does not disclose or make obvious at least one of the plurality of finger elements constructed of a strip of elastomeric material spiraled to form a tube within which a finger is disposed (claim 2) or an extending means for at least partially extending a digit of a hand and associated with at least one of a thumb cornerstone and a finger cornerstone of the hand and constructed of a strip of elastomeric material spiraled to form a tube that substantially surrounds a portion of the digit (claim 10).

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Hynes (US Pat. 3,347,547), *Lehneis et al.* (US Pat. 3,680,549), *Plough* (US Pat. 4,615,522), *Schaeffer* (US Pat. 4,674,487), *Patton, Sr.* (US Pat. 4,766,612), *Gordon* (US Pat. 4,781,178), *Barber* (US Pat. 4,862,877), *Weinzweig* (US Pat. 5,261,393), *Wedge, Jr.* (US Pat. 5,409,447), *Gray* (US Pat. 5,921,945), *Garris* (US Pat. 5,971,945), *Block* (US Pat. 6,450,924 B1), *White* (US Pat. App. Pub. No. 2003/0195093 A1), *Farrell et al.* (US Pat. 7,001,352 B2) and *Sherry* (AU 9532910 A) disclose devices having structure relevant to the claimed invention.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Victor K. Hwang whose telephone number is (571) 272-4976. The examiner can normally be reached Monday through Friday from 7:30 AM to 4:00 PM Eastern time.

The facsimile number for submitting papers directly to the examiner for informal correspondence is (571) 273-4976. The facsimile number for submitting all formal correspondence is (571) 273-8300.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jackie Ho can be reached on (571) 272-4696.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Victor K. Hwang
February 8, 2007


Cary E. O'Connor
Primary Examiner